

General

Title

Perioperative care: percentage of patients, aged 3 through 17 years of age, who undergo a procedure under general anesthesia in which an inhalational anesthetic is used for maintenance AND who have two or more risk factors for postoperative vomiting (POV), who receive combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively or intraoperatively.

Source(s)

American Society of Anesthesiologists (ASA). Prevention of post-operative vomiting (POV) - combination therapy for pediatric patients at high risk for POV. Schaumburg (IL): American Society of Anesthesiologists (ASA); 2015 Oct 1. 2 p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of patients, aged 3 through 17 years of age, who undergo a procedure under general anesthesia in which an inhalational anesthetic is used for maintenance AND who have two or more risk factors for postoperative vomiting (POV), who receive combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively or intraoperatively.

Rationale

Postoperative nausea and vomiting (PONV) is an important patient-centered outcome of anesthesia care. PONV is highly dissatisfying to patients, although rarely life-threatening. A large body of scientific

literature has defined risk factors for PONV; demonstrated effective prophylactic regimes based on these risk factors; and demonstrated high variability in this outcome across individual centers and providers (Kranke & Eberhart, 2011; Singla et al., 2010). Further, a number of papers have shown that performance can be assessed at the level of individual providers — the outcome is common enough that sufficient power exists to assess variability and improvement at this level (Dzwonczyk et al., 2012). A separate measure is needed for pediatric patients because the risk factors and recommended prophylaxis are different from adults.

Clinical Recommendation Statements:

The following evidence statements are quoted verbatim from the referenced clinical guidelines: Society for Ambulatory Anesthesia (SAMBA) recommendations:

Administer prophylactic antiemetic therapy to children at increased risk for post-operative vomiting (POV); as in adults, use of combination therapy is most effective (Gan et al., 2014).

All prophylaxis in children at moderate or high risk for POV should include combination therapy using a 5-hydroxytryptamine (5-HT₃) antagonist and a second drug. Because the effects of interventions from different drug classes are additive, combining interventions has an additive effect in risk reduction (Gan et al., 2014).

Evidence for Rationale

American Society of Anesthesiologists (ASA). Prevention of post-operative vomiting (POV) - combination therapy for pediatric patients at high risk for POV. Schaumburg (IL): American Society of Anesthesiologists (ASA); 2015 Oct 1. 2 p.

Dzwonczyk R, Weaver TE, Puente EG, Bergese SD. Postoperative nausea and vomiting prophylaxis from an economic point of view. *Am J Ther.* 2012 Jan;19(1):11-5. [PubMed](#)

Gan TJ, Diemunsch P, Habib AS, Kovac A, Kranke P, Meyer TA, Watcha M, Chung F, Angus S, Apfel CC, Bergese SD, Candiotti KA, Chan MT, Davis PJ, Hooper VD, Lagoo-Deenadayalan S, Myles P, Nezat G, Philip BK, Tram  r MR, Society for Ambulatory Anesthesia. Consensus guidelines for the management of postoperative nausea and vomiting. *Anesth Analg.* 2014 Jan;118(1):85-113. [PubMed](#)

Kranke P, Eberhart LH. Possibilities and limitations in the pharmacological management of postoperative nausea and vomiting. *Eur J Anaesthesiol.* 2011 Nov;28(11):758-65. [PubMed](#)

Singla NK, Singla SK, Chung F, Kutsogiannis DJ, Blackburn L, Lane SR, Levin J, Johnson B, Pergolizzi JV Jr. Phase II study to evaluate the safety and efficacy of the oral neurokinin-1 receptor antagonist casopitant (GW679769) administered with ondansetron for the prevention of postoperative and postdischarge nausea and vomiting in high-risk patients. *Anesthesiology.* 2010;113(1):74-82. [PubMed](#)

Primary Health Components

Perioperative care; general anesthesia; inhalational anesthetic; postoperative vomiting (POV); prophylaxis; pharmacologic anti-emetic agent; children; adolescents

Denominator Description

All patients, aged 3 through 17 years of age, who undergo a procedure under general anesthesia in which an inhalational anesthetic is used for maintenance AND who have two or more risk factors for postoperative vomiting (POV) (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Patients who receive combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively or intraoperatively (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory Procedure/Imaging Center

Hospital Inpatient

Hospital Outpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Individual Clinicians or Public Health Professionals

Statement of Acceptable Minimum Sample Size

Does not apply to this measure

Target Population Age

Age 3 to 17 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Health and Well-being of Communities

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

Unspecified

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Diagnostic Evaluation

Patient/Individual (Consumer) Characteristic

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

All patients, aged 3 through 17 years of age, who undergo a procedure* under general anesthesia in which an inhalational anesthetic is used for maintenance AND who have two or more risk factors for postoperative vomiting (POV)

Note: Risk factors for POV are:

- Surgery greater than or equal to 30 minutes
- Age greater than or equal to 3 years
- Strabismus surgery
- History of POV or postoperative nausea and vomiting (PONV) in parent or sibling

*Any procedure including surgical, therapeutic or diagnostic.

Exclusions

Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Patients who receive combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively or intraoperatively

Note:

- The recommended pharmacologic anti-emetics for postoperative vomiting (POV) prophylaxis in pediatric patients at risk of POV include (but may not be limited to):
 - 5-hydroxytryptamine (5-HT₃) receptor antagonists (recommended as the first choice for prophylaxis for POV in children)
 - Dexamethasone
 - Antihistamines
 - Butyrophenones

The foregoing list of medications/drug names is based on clinical guidelines and other evidence. The specified drugs were selected based on the strength of evidence for their clinical effectiveness. This list of selected drugs may not be current. Physicians and other

health care professionals should refer to the U.S. Food and Drug Administration (FDA)'s Web site page entitled "Drug Safety Communications" for up-to-date drug recall and alert information when prescribing medications.

Exclusions

Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Registry data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

Prevention of post-operative vomiting (POV) – combination therapy for pediatric patients at high risk for POV.

Measure Collection Name

Perioperative Care

Submitter

American Society of Anesthesiologists - Medical Specialty Society

Developer

American Society of Anesthesiologists - Medical Specialty Society

Physician Consortium for Performance Improvement® - Clinical Specialty Collaboration

Funding Source(s)

Unspecified

Composition of the Group that Developed the Measure

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Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2015 Oct

Measure Maintenance

Annually

Date of Next Anticipated Revision

2016 Nov

Measure Status

This is the current release of the measure.

Measure Availability

Source available from the [American Society of Anesthesiologists \(ASA\) Web site](#) .

For more information, contact ASA at 1061 American Lane Schaumburg, IL 60173-4973; Phone: 847-825-5586; Fax: 847-825-1692; E-mail: info@asahq.org; Web site: asahq.org .

NQMC Status

This NQMC summary was completed by ECRI Institute on March 23, 2016. The information was verified by the measure developer on April 26, 2016.

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Production

Source(s)

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